

## ABSTRACT

### APPARATUS AND METHOD FOR MACRO FINANCIAL RISK ANALYSIS AND PROCESSES

This invention relates to a method for calculating value changes, risk and risk transmission between entities, between groups of entities and sectors in an economy. A method executed by a computer under the control of a program includes the steps of storing financial and economic data on a computer. The financial and economic data relate to economic entities, including firms, financial institutions, governments and monetary authorities in an economy. The value of interlinked aggregate derivatives are calculated for preselected economic entities to generate a characterization of an economic value associated with implicit economic rights and implicit economic obligations to exchange a portion of assets or portion of debt. Methods using tools of pricing derivatives are used to measure the economic value changes. A method to calculate the assets and default barriers, distance to default, probability of default and probability of devaluation and risk transmission among entities and sectors is included. Reports and graphs with results are produced.